

REMARKSI. Introduction

In response to the Office Action dated May 2, 2005, the claims have not been amended. Claims 1-62 remain in the application. Re-examination and re-consideration of the application is requested.

II. REAL PARTY IN INTEREST

The real party in interest is Autodesk, Inc., the assignee of the present application.

III. RELATED APPEALS AND INTERFERENCES

There are no related appeals or interferences for the above-referenced patent application.

IV. STATUS OF CLAIMS

Claims 1-62 are pending in the application.

Claims 1-4 are rejected under 35 U.S.C. §103(a) as being unpatentable over Barnard (6,456,938) in view of DeLorme et al (5,848,373).

Claims 5, 7-9, 11-16, 18-31, 33, 34, 36, 37, and 57-60 are rejected under 35 U.S.C. §103(a) as being unpatentable over Barnard in view of DeLorme as applied to claims 1-4 above, and further in view of Ching (6,560,620 B1).

Claims 38-40 are rejected under 35 U.S.C. §103(a) as being unpatentable over Neal (6,192,518 B1) in view of Barnard.

Claims 41, 42, 44-49, 51, 52, 54, 61, and 62 are rejected under 35 U.S.C. §103(a) as being unpatentable over Neal in view of Barnard and further in view of Ching.

Claims 6, 10, 17, 32, 35, 37, 43, 50, 53, 55, and 56 are merely objected to as being dependent upon a rejected base claim but would be allowable if rewritten in independent form.

Applicants request reconsideration of all of the above rejections.

V. STATUS OF AMENDMENTS

No amendments to the claims have been made subsequent to the final Office Action.

VI. SUMMARY OF CLAIMED SUBJECT MATTER

Generally, all of the claims are directed toward a user marking up a map displayed on a screen of a personal digital assistant (PDA) (e.g., using a stylus). The summary set forth herein will describe independent claims 1, 2, 13, 15, 18, 20, 31, 33, 36, 38, 49, 51, and 54, and the dependent claims depending thereon.

Independent claim 1 provides a system for processing markup data for a map on a PDA (see page 4, lines 4-7). The first claim element provides for a PDA (see page 6, lines 7-13). The second claim element sets forth an application on the PDA that is configured with various functions (see page 6, lines 10-13 and page 9, lines 11-20). The application first obtains a map as an encoded and spatially indexed vector representation of geographic data from a server (see Fig. 1 and page 14, lines 8-12 and page 15, lines 3-7). The map is displayed on the screen of the PDA (see page 15, lines 3-7; item 600 of Fig. 6A, page 21, lines 6-7). The user then marks up the map with a stylus (see page 9, lines 9-20; page 15, lines 8-14; page 19, lines 19-23; item 602 of Fig. 6A, Fig. 5; page 21, lines 2-16). A file is then created that is comprised of the markup data (see page 15, line 18 – page 16, line 23; page 17, lines 16-20; and Fig. 3). The file is then uploaded from the PDA to the server (see 17, lines 16-20 and Fig. 3).

Independent claim 2 also provides a system for processing markup data for a map. The system of claim 2 provides for a PDA (see page 6, lines 7-13) and an application configured with various functions (see page 6, lines 10-13 and page 9, lines 11-20). The functions are set forth in two elements: (1) obtaining a file comprised of markup data for a map; and (2) uploading the file to a server (see page 15, line 18 – page 16, line 23, page 17, lines 16-20, and Fig. 3).

Dependent claim 3 provides that the markup data of claim 2 comprises pixel data for a markup entity (see page 15, lines 19-23).

Dependent claim 4 depends on claim 2 and provides that the PDA obtains the file of markup data by obtaining the markup data from a user (see page 9, lines 9-20; page 15, lines 8-14; page 19, lines 19-23; item 602 of Fig. 6A, Fig. 5; page 21, lines 2-16).

Dependent claim 5 depends on claim 4 and provides that the markup data is a redline line (see page 19, lines 19-23 and page 21, lines 1-16).

Dependent claim 6 depends on claim 5 and provides that the markup data is obtained from the user by determining when a new redline object has been selected and then obtaining a redline

object while a stylus remains in contact with a screen of the PDA (see page 19, lines 19-23 and page 21, lines 1-16).

Dependent claim 7 further depends on claim 6 and provides for displaying a text edit dialog box on the screen of the PDA and accepting user input in the text edit dialog box (see page 21, line 17-page 22, line 17).

Dependent claim 8 provides that the markup data of claim 4 is a note (see page 19, line 18-page 20, line 6; page 22, line 19-page 24, line 1).

Dependent claim 9 obtains the note of claim 8 through various steps including – determining when a new note object has been selected (see Fig. 7 and page 23, lines 1-6), accepting a user selection of an anchor point in a display of a map on the PDA (see Fig. 7 and page 23, lines 6-7), displaying a text entry screen on the PDA (see Fig. 7 and page 23, lines 7-8), accepting text user input into the text entry screen (see Fig. 7 and page 23, lines 8-11), and displaying an icon representative of a note at the anchor point (see Fig. 7 and page 23, lines 11-13).

Dependent claim 10 further elaborates on the data uploading to a server set forth in claim 2. Initially, a socket connection is obtained. Subsequently, an inventory of resident mapsets is obtained. The application then searches for markup data associated with the resident mapsets and uploads all of the resident markup data to the server. (See Fig. 4 and page 18, line 19 – page 19, line 11).

Dependent claim 11 provides a further limitation relating to claim 10. Specifically, claim 11 provides that the markup data is uploaded to a server directory on a server using a hypertext transfer protocol PUT request (see page 19, lines 3-11).

Dependent claim 12 depends on claim 11 and provides that the application downloads new mapsets, deletes unreferenced mapsets, and deletes any markup data associated with the deleted mapsets (see Fig. 4 and page 19, lines 7-11).

Independent claim 13 provides a system for processing markup data for a map. This claim is directed towards the server perspective and accordingly details the actions performed by a server. First the server obtains a file comprised of markup data for a map (see page 15, lines 18-19). Thereafter, the server converts the markup data to coordinate data and uses the coordinate data to obtain a standard data format (SDF) file that can be used to superimpose the markup data on the map (see page 15, line 19 - page 16, line 4).

Dependent claim 14 provides details regarding the coordinate data of claim 13. Namely, the coordinate data comprises mapping coordinate system (MCS) coordinates (see page 15, lines 19-23). Further, the server converts the MCS coordinates into latitude/longitude coordinates (see page 15, lines 19-23).

Independent claim 15 is directed towards a graphical user interface (GUI) used to obtain redline markup data on the PDA. Specifically, claim limitations specify that the graphical user interface determines when a new redline object has been selected (see Fig. 5, Fig. 6A, and page 21, lines 2-16) followed by obtaining a redline object while a stylus remains in contact with a screen of the PDA (see Fig. 5, Fig. 6A, and page 21, lines 2-16).

Dependent claim 16 provides further details with respect to claim 15. Namely, the GUI displays a text edit dialog box on the PDA screen and accepts text user input in the text dialog box (see page 21, line 17-page 22, line 17).

Dependent claim 17 provides the further ability to synchronize the redline markup data with a server (see Fig. 4, page 18, line 19-page 19, line 16).

Independent claim 18 is similar to independent claim 15 but provides details for obtaining note markup data for a map on a PDA (i.e. instead of redline markup data as in claim 15). In this regard, the limitations are similar to those set forth in claim 9 above. Namely, the application determines when a new note object has been selected (see Fig. 7 and page 23, lines 1-6), accepting a user selection of an anchor point in a display of a map on the PDA (see Fig. 7 and page 23, lines 6-7), displaying a text entry screen on the PDA (see Fig. 7 and page 23, lines 7-8), accepting text user input into the text entry screen (see Fig. 7 and page 23, lines 8-11), and displaying an icon representative of a note at the anchor point (see Fig. 7 and page 23, lines 11-13)..

Dependent claim 19 synchronizes the markup data with a server (see Fig. 4, page 18, line 19-page 19, line 16).

Dependent claims 56, 57, and 58 provide limitations with respect to the system of claims 1, 2, and 13 respectively. Namely the file comprised of markup data is separate from the file comprised of the geographic data and the map.

Claims 20-37 and 59-60 are method claims corresponding to system claims 2-19.

Claims 38-55 and 61-62 are article of manufacture claims corresponding to system claims 2-19.

VII. GROUNDS OF REJECTION TO BE REVIEWED

Applicants appreciate the indication of allowable subject matter. However, as set forth herein, Applicants respectfully traverse the rejections.

Claims 1-4 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Barnard (6,456,938) in view of DeLorme et al. (5,848,373).

Claims 5, 7-9, 11-16, 18-31, 33, 34, 36, 37, and 57-60 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Barnard in view of DeLorme as applied to claims 1-4 above, and further in view of Ching (6,560,620 B1).

Claims 38-40 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Neal (6,192,518 B1) in view of Barnard.

Claims 41, 42, 44-49, 51, 52, 54, 61, and 62 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Neal in view of Barnard and further in view of Ching.

VIII. ARGUMENTS

A. Barnard Does Not Qualify as a Prior Art Reference

Applicants submit that Barnard does not qualify as prior art with respect to the present invention. Specifically, the present invention was filed on July 31, 2000 and claims priority to various provisional applications filed on October 12, 1999 and March 29, 2000. However, Barnard was merely filed on July 21, 2000 and claims priority to a provisional application filed on July 23, 1999. Thus, while Barnard's provisional date beats the filing and priority dates of the present application, Barnard's actual filing date fails to beat the provisional based priority dates of the present invention. In this regard, Applicants submit that the present invention is entitled to the priority dates based on the claim language and support under 35 USC 112 found in the provisional applications relied upon. Accordingly, the question arises as to whether Barnard's provisional date may be used to establish priority over the present invention.

To rely on a provisional filing date to beat the date of the present invention, two conditions must be satisfied: (1) the subject matter of the claim in the issued patent must be supported in accordance with 35 U.S.C 112, first paragraph, in the earlier filed application, AND (2) the subject matter used in the rejection must be disclosed in the earlier-filed application in compliance with 35

U.S.C. 112, first paragraph, in order for that subject matter to be entitled to the earlier filing date under 35 U.S.C. 102(e). (See MPEP 201.11 and MPEP 706.02(f)(1); *Tronzo v. Biomet, Inc.*, 156 F.3d 1154, 47 USPQ2d 1829 (Fed. Cir. 1998); *In re Scheiber*, 587 F.2d 59, 199 USPQ 782 (CCPA 1978); *Studiengesellschaft Kohle m.b.H. v. Shell Oil Co.*, 112 F.3d 1561, 1564, 42 USPQ2d 1674, 1677 (Fed. Cir. 1997); and *New Railhead Mfg., L.L.C. v. Vermeer Mfg. Co.*, 298 F.3d 1290, 1294, 63 USPQ2d 1843, 1846 (Fed. Cir. 2002)).

It is clearly apparent that Barnard fails to meet the above two standards. For example, in rejecting claim 1, the Office Action relies on col. 42, lines 58 through col. 43, line 5 of Barnard to teach the claimed element of "encoded". Col. 42, lines 58 through col. 43, line 5 of Barnard is a portion of claim 44 of Barnard. The claims of Barnard are the only area of Barnard that utilize the term "encode". For these claims to have priority based on the provisional date, the provisional must support the claims as issued AND the subject matter used in the rejection (i.e., the use and description of the "encoding") must be disclosed in the provisional application. However, upon an examination of Barnard's provisional application (provided by the Examiner), there does not appear to be any use or description of an "encoding" or a process where data is encoded whatsoever. Further, Barnard's provisional application lacks support under 35 USC 112 for a portable information processing and viewing device that has an information processor for the storage, retrieval, and processing of data which encodes information. Applicants were unable to find any reference in Barnard's provisional to an information processor or encoding.

In view of the above, Applicants submit that the subject matter used to reject claim 1 was not disclosed in Barnard's provisional in accordance with 35 USC 112. Further, the subject matter used in the rejection (i.e., claim 44) lacks support under 35 USC 112 in Barnard's provisional application. Accordingly, the relied portion of Barnard cannot be used to reject the claims.

In response to the above assertions the prior final Office Action provided:

Examiner disagrees as per MPEP 201.04(b) as sec 35 USC 119(c) the provisional application date is the early filing date of non-provisional application. Barnard does teach an encoded and spatially indexed vector representation of geographic data. (Claims 54 and 55 of Barnard's do teach as well as elaborate term encoding and representation of geographic data. Barnard disclosure (Detail description) has same teaching and elaboration in (Cols. 12-18, 22, 27, 31, 32, 34-36, and provisional teaches on pages 52, 53, 54, 55).

Applicants respectfully disagree and traverse the above.

Firstly, the Examiner is relying on MPEP 201.04(b) and 35 USC 119(e) which clearly relate to provisional applications and fail to set forth the details with respect to claiming priority which are set forth in MPEP 201.11 and MPEP 706.02(f)(1) and the case law cited above. Such reliance completely lacks a legal foundation.

Secondly, as set forth above, the legal requirements require that (1) the subject matter of the claim in the issued patent must be supported under 35 U.S.C. 112 in the provisional, and (2) the subject matter used in the rejection must be disclosed in the earlier-filed application. The final Office Action has relied on provisional application pages 52, 53, 54, and 55 to satisfy both requirements (1) and (2). Applicants again note that pages 52-55 completely fail to mention the term "encoding" or "encode" and fail to describe the encoding of any information whatsoever. Accordingly, claims 44 and 55 (which both recite and use the term "encode") are not supported by the provisional application. On such a basis, Barnard is not entitled to the provisional date of the application. Further, pages 52-55 of the provisional also fail to describe an information processing and viewing device that has an information processor for the storage, retrieval and processing of data. Such an information processor is required in all of the issued claims 44, 54, and 55. In view of the above, Applicants submit that the language of the provisional application does not support the issued claims of Barnard. Accordingly, under requirement (1), Barnard is not entitled to the provisional date.

In addition, under requirement (2), the provisional fails to describe the subject matter that the Examiner has relied upon in the issued utility. Thus, under requirement (2), Barnard is also not entitled to the filing date of the provisional application.

In view of the above, Applicants submit that Barnard is not a valid reference with respect to the priority date of the present application and cannot be used to reject the present claims. In this regard, Applicants respectfully request that all rejections based on Barnard be reconsidered on such grounds.

Applicants note that the above arguments that were submitted in the Appeal Brief were not addressed at all in the pending Office Action. Applicants respectfully request reconsideration of the above previously submitted arguments.

B. Independent Claim 1 is Patentable Over the Cited Art

Independent claim 1 was rejected as follows:

Regarding Claim 1, Barnard teaches a system for processing markup data for a map (Col. 15, Lines 39-47) on a personal digital assistant (Col. 19, Lines 4-7) comprising: (a) a personal digital assistant (Col. 19, Lines 4-7); (b) an application on the personal digital assistant (Col. 15, Lines 39-47, Col. 19, Lines 4-7), the application configured to: (i) obtain a map as an encoded (Col. 42, Line 58 to Col. 43, Line 5, (Claims 54 and 55 of Barnard's do teach as well as elaborate term encoding and representation of geographic data. Barnard discloser (Detail description) has same teaching and elaboration in (Cols. 12-18, 22, 27, 31, 32, 34-36, and provisional teaches on pages 52, 54, 54, 55)) and spatially indexed vector representation of geographic data from a server (Col. 14, Lines 47-64); (ii) display the map on a screen of the personal digital assistant (Col. 15, Lines 39-42, Col. 19, Lines 4-12); (iii) obtain markup data (Col. 15, Lines 34-47) comprised of pixel data (Col. 12, Lines 37-39) from a user that utilizes a stylus to markup the map displayed on the personal digital assistant (Col. 13, Lines 33-41); (iv) create a file (Col. 18, lines 14-18) comprised of the markup data (Col. 21, Lines 3-63); (v) upload the file of markup data from the personal digital assistant to the server (Col. 36, Lines 33-42).

However, Barnard fails to teach or recite in specification obtain a map as an encoded and spatially indexed vector representation of geographic data from a server.

However, DeLorme et al. teaches obtain a map as an encoded and spatially indexed vector representation of geographic data from a server (Col. 21, Line 56 to Col. 22, Line 6, Col. 21, lines 19-30, Col. 22, Lines 50-54, Col. 56, lines 44-54, Col. 60, line 60 to Col. 61, Line 10, Col. 63, Lines 56-65).

Thus it would have been obvious to one in the ordinary skill in the art at the time of invention was made to incorporate the teaching of DeLorme et al. in to the Barnard to be able to have encoded map data for correlation and coordination of spatially related vectored data between digital different electronic medias.

Applicants traverse the above rejection for at least one or more of the following reasons:

- (1) Neither Barnard nor DeLorme teach, disclose or suggest an encoded and spatially indexed vector representation of geographic data;
- (2) Neither Barnard nor DeLorme teach, disclose or suggest obtaining markup data, creating a file comprised of the markup data, and uploading the markup data from a PDA to a server;

As described above, independent claim 1 provides a system for processing markup data for a map on a PDA. Specifically, an application on a PDA is configured with various functions. The application first obtains a map as an encoded and spatially indexed vector representation of geographic data from a server. The map is displayed on the screen of the PDA. The user then marks up the map with a stylus. A file is then created that is comprised of the markup data. The file is then uploaded from the PDA to the server.

The cited references do not teach nor suggest these various elements of Applicants' independent claims. In addition, as indicated above, the priority date of Barnard cannot be relied upon for priority purposes.

Applicants submit that Barnard fails to teach the invention as claimed. Specifically, claim 1 provides that the map is obtained as an encoded and spatially indexed vector representation of geographic data. In rejecting this element, the Office Action relies upon col. 14, lines 47-64. However, this portion of Barnard (and the remainder of Barnard) merely describes a vector-map. Mere recital of a vector-based map ignores the specifically claimed terms "spatially indexed". Under MPEP §2142 and 2143.03 "To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). "All words in a claim must be considered in judging the patentability of that claim against the prior art." *In re Wilson*, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970)." In this regard, the terms "spatially" and "indexed" cannot merely be ignored when rejecting the claims. These terms have specific meanings as set forth in the application. In addition, Barnard completely fails to teach, suggest, or even remotely allude to a spatially indexed vector representation of geographic data. Instead, Barnard merely describes a vector-map without disclosing whether it is or is not spatially indexed. Such a teaching cannot read on the present invention under either 35 USC 102 or 103.

The Office Action admits Barnard's failure to teach this claim element. Instead, the action relies on DeLorme. However, Applicants submit that DeLorme also fails to teach these specifically claimed elements. Again, the claims explicitly require that the map is an encoded and spatially indexed vector representation of geographic data. Nowhere in DeLorme is there any description, implicit or explicit, that even remotely described vector data that is spatially indexed. In this regards, the spatial indexing of the geographic data cannot merely be ignored when applying the prior art. DeLorme. In fact, an electronic search of DeLorme for the term "index" provides a single result in col. 43, line 19 that provides that an a CAMLS loc/object may have a loc/object type index that is part of the ID of every CAMLS loc/object. However, such an index for a CAMLS loc/object does not teach, describe, suggest, or allude to geographic data that is spatially indexed as claimed. The spatial indexing as set forth in the claims is clearly described in the specification and related

applications (that are incorporated by reference). Without describing any spatial indexing whatsoever, DeLorme cannot possibly teach this claim element.

The remainder of claim one provides for obtaining markup data, creating a file comprised of the markup data and uploading the markup data from the PDA to the server. Applicants note that the file comprised of the markup data is clearly distinguishable from the map or geographic data as set forth in the claims. Specifically, the map is obtained as an encoded and spatially indexed vector representation of geographic data from a server. The application on the PDA then creates the file with the markup data. In rejecting these claim elements, the Office Action relies on Barnard col. 18, lines 14-18, col. 21, lines 3-63, and col. 36, lines 33-42. Applicants note that col. 18, lines 14-18 provide for map data files that includes score card data such as hole data and other course data. In this regard, Barnard's map data file contains all of the course data and information for a particular golf course. This concept of a single file for all map data is clearly set forth in Barnard's provisional application on page 37, section 2.3.4. However, Barnard does not teach nor suggest that there are two separate files for the map data and the markup data (as claimed). The claims provide for creating the file and clearly distinguish between the file containing the markup data and the map data/map set. Further, to more clearly distinguish that separate files are used, dependent claims 56-62 specify that the files are separate (see argument below with respect to these dependent claims).

Also, as described above, the claims provide that the created file is comprised of the markup data. In rejecting the file comprised of markup data, the Office Action recites col. 21, lines 3-63. However, Applicants note that nowhere in col. 21, lines 3-63 is there any description of a file whatsoever. Further, there is no creation of a file that is comprised of markup data. Instead, towards the end of col. 21, Barnard merely describes logging GPS locational data at a predetermined rate. Such locational data is not markup data as set forth in Barnard or as set forth in the present claims. Further, logging GPS data is not even remotely equivalent to creating a file (regardless of whether that file is comprised of markup data or not).

In view of the above, Applicants submit that claim 1 is allowable over the cited references. In this regard, various portions of Barnard are not permitted to be relied upon for priority purposes. Further, the teaching of Barnard fails to set forth various elements/limitations of the present claims.

Applicants also note that the above arguments were submitted in response to the first Office Action. In response, the prior final Office Action provides:

Applicant argues obtaining markup data, creating a file comprised of the markup data and uploading the markup data from PDA to server.

Examiner disagrees Barnard does teach obtaining markup data (Col. 21, lines 18-27, col. 25, lines 43-49, col. 28, lines 33-61), creating a file comprised of the markup data (Col. 21, Line 17 to Col. 22, Line 67) and uploading the markup data from PDA to server (Col. 25, Lines 33-56).

Applicants respectfully disagree with and traverse the above assertions. Applicants asserted that Barnard fails to teach creating a file comprised of the markup data wherein the claims clearly set forth that such a file is different from the map received from the server. The Examiner disputes such an assertion relying on col. 21, line 17 to col. 22, line 67. Instead of teaching the claimed limitations, Applicants submit that such a portion teaches away from the claim limitations. Firstly, the cited portion describes the use of a "Mark" function during which pressed position data is stored in RAM (see col. 21, lines 30-32). Applicants note that RAM is random access memory and is not a file. As understood in the art, RAM is not created and is temporary memory that is clearly and easily distinguishable from the creation of a file which is not stored in RAM but in storage (e.g., a disk). In addition, the cited portion clearly indicates that that data is logged in the map file (see col. 22, lines 54-55). Applicants note that the map file is the same file that contains the map that is being marked up. Accordingly, a file comprised of the markup data is not being "created" by the application on the PDA. Instead, Barnard's existing map file (and not a newly created file) is merely being used to maintain the log.

In view of the above, Applicants submit that by teaching the logging of data to an existing map file, Barnard explicitly teaches away from the claimed creating of a file that is comprised of the markup data and thereafter uploading the file of markup data from the PDA to the server. Thus, contrary to that asserted in the final Office Action, Barnard teaches away from the present invention. Further, since Barnard teaches away from the implementation, even if DeLorme is found to teach the element, Barnard cannot be combined with DeLorme based on such a teaching away.

In view of the above, Applicants submit that claim 1 is allowable over the cited art and requests reconsideration of the rejections set forth in the final Office Action.

C. Independent Claim 2 is Patentable Over the Cited Art

Claim 2 provides for a PDA, obtaining a file comprised of markup data for a map and uploading the file to a server. Applicants reassert the arguments set forth above with respect to

claim 1. In this regard, Applicants submit that Barnard completely fails to describe obtaining a file comprised of markup data for a map. Instead, Barnard merely provides for obtaining position data into RAM. Further, Barnard merely uses a single map data file containing vector and attribute data (see page 20, paragraph 2 of the provisional application). Such a teaching is clearly distinguishable from the claimed file, which simply comprises markup data for a map that is separable from the map data. Further, dependent claims 56-62 (discussed in detail below) specify that the file comprised of the markup data is separate from a file comprising the map.

In view of the above, Applicants submit that claim 2 is allowable over the cited references and respectfully requests reconsideration of the rejections.

D. Dependent Claims 3-5 Are Not Separately Argued.

E. Dependent Claim 6 Has Merely Been Objected to as Containing Allowable Subject Matter and is Therefore Not Separately Argued.

F. Dependent Claims 7-8 Are Not Separately Argued

G. Dependent Claim 9 is Patentable Over the Cited Art

Claim 9 provides for obtaining a note markup data for a map on a PDA. Specifically, upon selecting a new note object, an anchor point is selected, a text entry screen is used to enter text input, and an icon representative of a note is displayed at the anchor point. Applicants submit that neither Barnard nor Neal teach, disclose or suggest displaying an icon representative of a note at an anchor point selected by a user.

In rejecting this claim, the Office Action recites various portions of cols. 20, 21, 22, and 23. However, Applicants note that nowhere in cols. 20-23 is there any suggestion, implicit or explicit, for displaying an icon representative of a note at an anchor point as claimed. To reject this claim element, the Office Action recites col. 21, lines 65-67 and col. 22, lines 2-5 which provide:

When "Point" is pressed the current location is logged. Immediately following this, the user is prompted for a note to define the point.

End

The user should press the End button as she nears the original start point of an area or the end of a line. When "End" is pressed, the user is prompted for a note to be added about that feature.

As set forth in this portion, Barnard merely prompts a user for a note to define a point. There is no icon displayed or indication that a note is associated with a particular attribute or anchor point on the map (as claimed). The claims specifically provide for displaying such an icon. Further, an electronic search of Barnard for the term "icon" provides no results whatsoever. Without even mentioning the word "icon", Barnard cannot possibly teach displaying such an icon at a particular location on a map.

In response to the above arguments, the prior final Office Action provides:

(e) display an icon (Col. 23, Lines 2-27, Lines 30-56, Col. 24, lines 2-16, where "CoG" or "FoG" are ICON representing a specific file to be opened by stylus) representative of a note at the anchor point (Col. 21, Lines 65-67, Col. 22, Lines 2-5).

Applicants respectfully traverse these assertions. Again, the claims provide for displaying an icon representative of a note at an anchor point. The cited portions (and the remainder of Barnard) do not provide for displaying any such icon at all. Instead, the cited portions consistently provide for labeling the data to be logged in the map file (see col. 21, lines 2-4, 11-13, 19-21, 25-26, etc.). Such a label in the map file is not an icon or the displaying of an icon of any sort. Instead, the label is inserted within the map file and is not displayed.

Additionally, after the data is labeled and completed, the user has the option of adding a note. Accordingly, even if the "label" is deemed equivalent to the claimed ICON, such a "label" cannot be representative of a note since the label is inserted regardless of whether a note is added. For example, col. 23, lines 25-28 provide:

When "Rough" is selected, the system shall label the data to be logged in the map file with a unique identifier for a rough. It then advances to the next menu. After "End" is pressed, a note may be added.

Such a teaching is clearly distinguishable from the present invention.

The final Office Action then asserts that "CoG" or "FoG" are icons representative of a note that is displayed at the anchor point. Applicants respectfully disagree. Fig. 12 illustrates the items

	AREA	A or L	A/L/P	LINE	POINT
SETUP	TRE	BUNKR	TREE	PATH	PIN
DGPS	FRWAY	ROUGH	BUSH	OB	C-o-G
LINKS	GREEN	WATER	ROCK	DITCH	
EDIT	HOLE	BLDG	MOUND		
MARK					
VIEW	BACK		OTHER		

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CoG:

As illustrated in Fig. 12, the items C-o-G is not displayed at an anchor point. Instead, it is displayed within a table. Further, similar to the "Rough" example described above, only after the user depresses CoG is the user prompted to enter a hole number and note (col. 24, lines 2-5):

When "CoG" is selected the GPS location available at the serial port is labeled and logged in the map file with a unique identifier for the center of a green. After "CoG" is pressed the user is prompted to enter the hole number and a note.

Accordingly, the CoG icon cannot be representative of a note (since the note is only entered after the user has depressed an icon), and is not displayed at the anchor point the user has selected (as claimed). The similar requirements apply to FoG (see col. 24, lines 10-13).

Thus, in view of the above, Applicants submit that Barnard cannot and does not teach, disclose, or suggest the various limitations set forth in claim 9 and respectfully requests reconsideration of the rejection.

H. Dependent Claim 10 Has Merely Been Objected To as Containing Allowable Subject Matter and is Therefore Not Separately Argued

I. Dependent Claim 11 is Patentable Over the Cited Art

Claim 11 adds the further limitation that the markup data is uploaded using an HTTP PUT request. In rejecting this claim, the final Office Action relies on col. 17, lines 49-52 and col. 15, lines 32-36 and 45-47. Col 17, lines 49-52 provides that a web server may generate an HTML page with results of a search and return the information to a PC via the Internet. Col 15, lines 32-36 provide that an image of a local course map requested by a user would have been gathered by aircraft or satellite and placed in a publicly accessible database. Col. 15, lines 45-47 provide that the World Wide Web Consortium's Vector Markup Language (VML) can be employed to edit 2D golf course vectors online.

As can be seen, none of the cited text recites the use of a PUT command. Further, none of the cited text even describes the uploading of a map to a server from a PDA device. In addition, Applicants note that an electronic search of Barnard for the term "put" only provides results for the

terms "input" and "putt". Without even mentioning an HTTP command or a PUT command, Barnard cannot possibly, teach, disclose, or suggest, this claimed element.

J. Dependent Claim 12 is Patentable Over the Cited Art

This dependent claim further builds upon claim 10 and provides that the application on the PDA performs additional steps. Namely, any new mapsets are downloaded and un-referenced mapsets are deleted. Further, any markup data associated with the deleted mapsets are deleted. Thus, when viewed in conjunction with claim 10, this claim enables the updating of the PDA device. In this regard, new mapsets are downloaded from the server. Additionally, if any mapset is not referenced, the mapset and any markup data associated with the mapset are deleted.

In rejecting this claim, the Office Action relies on Barnard col. 20, lines 43-49 which provides:

For an entire attribute deletion ("All") a confirmation window stating the pending action shall be displayed with a confirming "Yes" or "No" selection required. The user must select a vertex to be deleted with the stylus before the "Point" button will work. If "Point" is pressed and no point to be deleted has been selected, the user is prompted to do so. A selected vertex shall change from an unfilled 2.sup.nd box to a filled box when it is selected. Retouching it will deselect it. Further relevant description may be found under the common components section following the "Apply", "Save" and "Cancel" items.

This text clearly illustrates that an attribute of a map or all of the attributes of a map may be deleted. However, deleting attributes of a map are not similar nor to they render obvious the deletion of a mapset. In this regard, as set forth in the specification and related applications, a mapset is a set of maps and not merely a single map (see co-pending United States Patent Application Serial No. 09/629,117, entitled "METHOD AND APPARATUS FOR OBTAINING A SET OF MAPS", by Nemmara Chithambaram et al., Attorney Docket No. 30566.112USU1, filed on July 31, 2000, which application is incorporated by reference into the present application).

Further, even if deletion of one or more attributes renders obvious the deletion of a mapset (which Applicants traverse), such a disclosure fails to determine whether such attributes are referenced or not. The claims specifically provide for deleting unreferenced mapsets. The cited text from Barnard (and the remainder of Barnard) fail to teach whether a mapset is referenced or unreferenced and the deletion of unreferenced mapsets.

In addition, once a mapset is deleted, any markup data associated with the deleted mapset is also deleted. Barnard fails to teach the deletion of markup data associated with any deleted mapsets.

K. Independent Claim 13 is Patentable Over the Cited Art

Claim 13 is similar to claims 1 and 2 in that the file comprises markup data for a map. Claim 3 further provides for converting the markup data to coordinate data and using the coordinate data to obtain an SDF file that can be used to superimpose the markup data on the map.

Applicants reassert the arguments above with respect to claims 1 and 2 regarding the markup file. In addition, Applicants traverse the rejection of the other elements of claim 13. In rejecting the conversion of the markup data to coordinate data, the Office Action relies on col. 13, lines 3-16, col. 15, lines 45-47 and lines 56-59. Col. 13, lines 3-16 merely provides that when a mapping process is started, the current GPS location of the receiver is logged. Further, as the device moves, the new locations are logged. Such a logging of location is not equivalent to converting markup data to coordinate data.

Firstly, Applicants note that claim 13 is a server system and is not a PDA device. The claim provides a system for processing markup data for a map comprising a server that is configured to perform the various listed functions. Thus, the claim includes a limitation that the system is a server based system. Col. 13, lines 3-16 clearly provide for a mapping process utilizing the portable device of Barnard. In this regard, the device is a client based device that can easily obtain the coordinate information via its GPS system. However, the claims provide for converting markup data (received/obtained e.g., from a PDA device) into coordinate data. Such a server does not have a built in GPS system since it is stationary (nor is there any description of such a GPS system in the present specification). Further, Applicants note that markup data is not equivalent to location data. The two are entirely different concepts that the Office Action is improperly intertwining.

Col. 15, lines 45-47 and 56-59 merely describe that a vector markup language can be used to edit golf course vectors online and that accurate golf course elevation points can be tagged with latitude and longitude coordinates using various techniques such as a GPS system. Again, such a teaching is performed on Barnard's device itself and is not used on a server. Further, the elevation point data is not converted into coordinate data as claimed. Instead, the elevation point data is

tagged with latitude and longitude merely by using a GPS system, Laserplane system, etc. (as described in Barnard) (see col. 15, lines 55-col. 16, line 46).

Claim 13 further provides obtaining an SDF file that can be used to superimpose the markup data on the map. Firstly, Applicants note that an SDF file is a particular type of format as set forth in the claims and specification. In this regard, an electronic search of Barnard for the term "SDF" provides no results whatsoever. Without even mentioning the format SDF, Barnard cannot possibly teach or anticipate a claim that obtains an SDF file. Additionally, the file is used to superimpose the markup data on the map. In rejecting this claim element, the Office Action relies on col. 17, lines 57-61, which provides:

The exchange of user mapped courses will enable multiple user processing and editing to greatly enhance the quality of the maps. Moreover, individual users may add or modify features to existing course maps as they are encountered on a course.

Not one word of this text even remotely refers to, describes, or suggests, implicitly or explicitly, the superimposing of markup data on a map. Instead, the text merely refers to adding or modifying features on a course map as they are encountered on a course. Such editing in accordance with Barnard may simply open the map and/or features without ever superimposing markup data on the map. Further, an electronic search of Barnard for the terms "super" and "impose" provide no results. Accordingly, Barnard does not and cannot anticipate, teach, suggest, or render obvious claim 13.

In response to the above arguments (submitted in response to a first Office Action), the prior final Office Action provides:

Applicant argues Barnard fails to teach or suggests a server converting markup data to coordinate data.

Examiner disagrees Barnard teaches or suggests a server converting markup data to coordinate data (Col. 15, Line 25 to Col. 18, Line 2).

Applicant argues Barnard fails to teach or suggests a SDF (standard data file) file.

Examiner disagrees as Barnard teaches or suggests a SDF (standard data file) file (Col. 23, Lines 2-7, 9-28).

Applicant argues Barnard fails to teach or suggests super imposing markup data on a map.
Examiner disagrees as Barnard teaches or suggests super imposing markup data on a map (Col. 15, Lines 25-54).

With respect to the conversion of markup data to coordinate data, Applicants respectfully traverse the assertions in the final Office Action. Col. 15, line 25 to col. 18, line 2 describes a user using a GPS device to obtain data which is then transferred to a web site. Applicants assume the

final Office Action is asserting the GPS data is equivalent to markup data. However, unlike the present claims, such GPS data is the markup data and is converted on the GPS device itself. Again, the claims provide a clear limitation that the system is a server that is configured to provide various functions. Instead of performing any conversion on the server, Barnard teaches the PDA device performing all functions and then uploaded data to a web site. In this regard, Barnard completely fails to teach, describe, or suggest, implicitly or explicitly, a server performing a conversion of markup data to coordinate data as claimed.

With respect to the SDF file limitations, the prior final Office Action relied on col. 23, lines 2-7 and 9-28. This portion of text merely describes the logging of data into a map file. Such a teaching is not equivalent to the SDF file set forth in the claims and described in the specification of the present invention. Page 15, line 18 - page 16, line 3 of the present specification describes SDF files. In this regard, the term SDF has a particular meaning that is established in the specification. The final Office Action is merely equating a map file with a particular SDF file. In this regard, the final Office Action is not giving the term SDF any additional meaning beyond that of a map file. Further, the claims themselves provide that the SDF file can be used to superimpose the markup data on the map. Such functionality establishes a difference between the map file to which data is being logged as set forth in Barnard.

In view of the above, Applicants submit that claim 13 is in allowable form and respectfully request reconsideration of the rejections.

L. Dependent Claim 14 is Patentable Over the Cited Art

As stated above, dependent claim 14 provides details regarding the coordinate data of claim 13. Namely, the coordinate data comprises mapping coordinate system (MCS) coordinates (see page 15, lines 19-23). Further, the server converts the MCS coordinates into latitude/longitude coordinates (see page 15, lines 19-23). Thus, as claimed, the server converts MCS coordinates into latitude/longitude coordinates.

In rejecting this claim, the Office Action relies on col. 13, lines 3-16, col. 15, lines 45-47 and 56-59. Col. 13, lines 3-16 provide:

FIG. 3 is a depiction of a golf course mapping process. In this depiction, as an example of a golf course feature to map, a user 25 walks the perimeter 26 of green 27 to construct a vector image display 28 of the actual green 27 in real time on the display 28 of the display module 1A. It should be

understood that the following procedure is also used on bunkers, water hazards, fairways, tee boxes and other golf course features. When the software mapping process is started, the current location (Latitude and Longitude (Lat/Lon)) of the receiver 52 is logged as a new vertex 29 in the RAM of the display module 1A. The vertex 29 is also displayed on the display 28 at the same moment it is logged. Following that, locations or vertexes are logged approximately once per step or pace of the user at a pre-determined time interval (each second is operable).

As can be seen in this text, the PDA device obtains a current location specified by latitude and longitude and logs the location as a vertex into RAM. Thus, the PDA device is obtaining LAT/LON coordinates. Col. 15, lines 45-47 provides:

The World Wide Web Consortium's Vector Markup Language (VML) can also be employed to edit 2D golf course vectors online.

Col. 15, lines 56-59 provides:

Although not typically mapped by a user, accurate golf course elevation point data can be tagged with latitude and longitude coordinates and gathered into the inventive unit via any of the following methods:

All of the above cited text clearly illustrates a PDA unit obtaining LAT/LON coordinates. However, such text (and the remainder of Barnard) does not describe the conversion of MCS coordinates into LAT/LON coordinates. Instead, such text describes obtaining LAT/LON coordinates and possibly converting it into something else (e.g., into a vertex for logging into RAM). Accordingly, contrary to the claimed conversion of MCS coordinates into LAT/LON coordinates, Barnard teaches converting LAT/LON coordinates into something else (the opposite conversion of that claimed).

In addition to the above, Applicants assert that Barnard fails to teach mapping coordinate system (MCS) coordinates. In this regard, an MCS is a particular type of coordinate system used for storing coordinates for a map. No such coordinate system is described or referenced in Barnard.

In view of the above, Applicants respectfully request reconsideration of the rejection of claim 14.

M. Independent Claim 15 is Patentable Over the Cited Art.

Claim 15 provides for obtaining redline markup data on a map. Specifically, a new redline object is selected. Thereafter, a redline object is obtained while a stylus remains in contact with a screen of the PDA. It is well established and set forth in the specification that the redline object is an object comprised of a redline that is used to comment/markup the drawing/map displayed on

the PDA. Further, the redline is a zero width vector that mimics ink flowing from a stylus, and an associated text note that pops up as a tooltip when the object is selected (see page 6, lines 7-17).

Such a redline object is not equivalent to the vectors cited in Barnard. Specifically, Barnard merely provides for the creation of various vertex points by moving Barnard's device (e.g., a GPS system). Vectors are drawn between the points (see col. 13, lines 3-41). The user can then edit the vertex points using the stylus to drag one vertex location to another vertex location. The vectors/rays between the vertex points are dragged with the dragged vertex point (see col. 13, lines 34-41). Accordingly, instead of marking up a map with a redline (as claimed), Barnard merely allows the user to adjust a vertex attached to a line. Such a teaching does not even remotely suggest the present invention.

As stated above, this claim specifies details for obtaining markup data from a user. Namely, a determination is made regarding when a new redline object has been selected. Thereafter, a redline object is obtained while a stylus remains in contact with a screen of the PDA.

In rejecting this claim, the final Office Action relies on col. 13, lines 34-41 to teach the determination element. However, contrary to that asserted in the Office Action, col. 13, lines 34-41 do not provide for a determining when a new redline object has been selected. Instead, col. 13, lines 30-41 of Barnard merely provides the ability so correct an existing vertex:

The GPS mapping software of the present invention provides the user the ability to move errant vertexes 35 into a position on the display that more correctly represent the perimeter of the course attribute being mapped. This is an opportune time and place to make corrections to the data since the user has just traversed the object and knows its approximate shape. On the display 28 of the Display Module 1A, as a stylus is touched to a vertex 29 and it is dragged to a location that better defines the shape that was just mapped, the attached rays 30 follow. When the stylus is removed from the Display Module 1A, the new vertex location 35A is logged in place of the old one.

As can be seen in this cited text, Barnard provides the ability for the user to select a vertex that is part of an existing line and the ability to adjust the vertex. Such a selection of an existing vertex is not a determination of when a new redline object has been selected. In this regard, a new redline object is not equivalent to an existing vertex of a shape. Further, Barnard's shape that is adjusted (i.e., by moving the selected vertex) is not marking up the shape but is adjusting the shape. Also, such an adjustment is not a redline line.

The Office Action continues and relies upon col. 15, lines 36-54, 56-58, col. 16, lines 37-42, col. 21, lines 47-62, col. 22, lines 14-40, and col. 23, lines 2-7 and 9-27 to teach the claimed obtaining

of the redline object. Further, the final Office Action relies on col. 13, lines 49-52, col. 13, lines 34-41, and col. 14, lines 9-11 for the stylus controlled aspects of the claim. Applicants respectfully disagree with such an assertion.

Applicants note that all of the cited portions do not address marking up a map through a user controlled stylus operation. Instead, these portions of Barnard recited for the "obtaining" aspect of the claim describe the process of creating a map or marking up a map merely through the use of positioning data obtained by the GPS device. In this regard, Barnard completely fails to describe, implicitly or explicitly, the ability to markup a map using a stylus to draw a line. Instead, as set forth in col. 21 and 22, the user selects a mark function (followed by the selection of a specific mark type) wherein the system begins collecting position data via the GPS device. Such portions do not describe, suggest, or allude to the collection of any markup data using a stylus device that remains in contact with a screen to create a redline object.

In addition, the portions relied upon for the stylus aspects of the claim also fail to describe a dragging stylus to obtain a redline object. Instead, the cited portions of Barnard (and the remainder of Barnard) merely describe the ability to adjust a vertex (as described above) and that the system may color a vertex in red to indicate the quality of the position information (see col. 13, lines 49-51). In this regard, the cited portions fail to describe the creation or obtaining of a redline object while a stylus remains in contact with a screen of the PDA.

In view of the above, Applicants submit that claim 15 is allowable over the cited references and respectfully request reconsideration of the rejections.

N. Dependent Claim 16 is Patentable Over the Cited Art

Dependent claim 16 provides further details with respect to claim 15. Namely, the GUI displays a text edit dialog box on the PDA screen and accepts text user input in the text dialog box (see page 21, line 17-page 22, line 17).

Applicants assert the arguments set forth above with respect to claim 7. In view of such arguments, Applicants respectfully request reconsideration of the rejections of claim 16.

O. Dependent Claim 17 Has Merely Been Objected To as Containing Allowable Subject Matter and is Therefore Not Separately Argued

P. Independent Claim 18 is Patentable Over the Cited Art

Claim 18 provides for obtaining a note markup data for a map on a PDA. Specifically, upon selecting a new note object, an anchor point is selected, a text entry screen is used to enter text input, and an icon representative of a note is displayed at the anchor point.

In rejecting this claim, the Office Action recites various portions of cols. 20 and 21. However, Applicants note that nowhere in cols. 20 or 21 is there any suggestion, implicit or explicit, for displaying an icon representative of a note at an anchor point as claimed. To reject this claim element, the Office Action recites col. 21, lines 65-67 and col. 22, lines 2-5 which provide:

When "Point" is pressed the current location is logged. Immediately following this, the user is prompted for a note to define the point.
End

The user should press the End button as she nears the original start point of an area or the end of a line. When "End" is pressed, the user is prompted for a note to be added about that feature.

As set forth in this portion, Barnard merely prompts a user for a note to define a point. There is no icon displayed or indication that a note is associated with a particular attribute or anchor point on the map (as claimed). The claims specifically provide for displaying such an icon. Further, an electronic search of Barnard for the term "icon" provides no results whatsoever. Without even mentioning the word "icon", Barnard cannot possibly teach displaying such an icon at a particular location on a map.

The Office Action further asserts that Ching teaches an encoded markup data is a redline line at col. 6, lines 17-35 , col. 20, lines 6-10 and 18-21. Applicants submit that the redline line is not part of claim 18. Accordingly, it is unknown why Ching is being used to assert such a claim element.

In addition to the above arguments, Applicants reassert the arguments set forth above with respect to claim 9. In view of such arguments, Applicants submit claim 18 is in allowable form and respectfully request reconsideration of the rejections.

Q. Dependent Claim 19 is Not Separately Argued

R. Dependent Claim 56 Has Merely Been Objected To as Containing Allowable Subject Matter and is Therefore Not Separately Argued

S. Dependent Claims 57-58 Are Patentable Over the Cited Art

Dependent claims 56, 57, and 58 provide limitations with respect to the system of claims 1, 2, and 13 respectively. Namely, these claims provide that the markup data is separate from a file of the geographic data/map.

In rejecting these claims, the Office Action relies on Barnard, col. 18, lines 3-20, col. 25, lines 34-56, col. 15, lines 17-53, col. 16, lines 51-67, col. 41, lines 8-64, and col. 27, lines 31-33.

Col. 18, lines 3-20 describes map data files that can include typical score card data.

Col. 25, lines 34-56 describes the ability to upload course data to a PC for use in an instant replay. This portion of text also describes how a user can edit the course map and upload such a course map to a web site.

Col. 15, lines 17-53 describes a satellite or aerial picture of a golf course obtained by a user (wherein GPS coordinate are captured each time a picture is taken). Thereafter, the user can upload the pictures and coordinates to a web server. Further, the user can then retrieve the uploaded golf course images (i.e., the image captured by the user or by another user) and open up his own vector mapped data obtained using a GPS device and display it over the top of the web page image. Thus, col. 15, lines 17-53 does describe the placement of a vector map file over a web page image.

However, Applicants note that such golf course images are only images that can be used by users to trace and create the map file for PDA use (see col. 15, lines 23-24 and 39-42). Accordingly, the graphic image that the vector map is placed over is merely used to allow the user to trace and update the user's vector map file. Such a graphic image is not a map as set forth in the claims or as understood in the art.

Col. 16, lines 51-67 describes the user of a PDA GPS type device that is used to create or edit maps of golf courses and exchange such information with other golfers through an Internet site. The text describes how the course can be edited using positional data.

Col. 41, lines 8-64 are claims 27-31 of Barnard. Barnard claim 27 describe the ability to label a topographic characteristic of a map (see claim 25) using positional data obtained from the device. Barnard claims 28 and 30 specify that a geographic region is a golf course and position information

comprises attributes of the golf course. Further, the map data file is retrieved from positional equipment at the golf course. Barnard claim 29 describes the ability for a user to modify location data. Barnard claim 31 describes the use of a position module of a PDA that can be used to store and display the map data file. Barnard claim 32 describes a viewing device that has a data link.

Col. 27, lines 31-33 describe displaying a name for courses loaded into a RAM flash card or other memory storage system.

The above cited texts all describe various features of Barnard. However, none of the described features even remotely describe markup data that is maintained in a separate file from that of the geographic data/map (as claimed). In this regard, the above cited text (and the remainder of Barnard) consistently describes a map file that contains the data obtained by the user through the GPS system. The text fails to describe, implicitly or explicitly, any separation of markup data from a map itself. Further, the text describes how the obtained positional data is stored with the map file itself and not separately. The Examiner has failed to site any portion of Barnard that teaches or even remotely alludes to the separation of markup data from the map file (as claimed). To the contrary, Barnard teaches away from such an implementation by teaching the editing of a map itself with any data from the user.

In view of the above, Applicants respectfully request reconsideration of the rejections.

T. Dependent Claims 20-37, 59-60, 38-55, and 61-62 Are Not Separately Argued

Claims 20-37 and 59-60 are method claims corresponding to system claims 2-19.

Claims 38-55 and 61-62 are article of manufacture claims corresponding to system claims 2-19.

For the reasons stated above with respect to the corresponding claims, Applicants traverse the rejections of these claims and respectfully request reconsideration of the rejections.

Moreover, the various elements of Applicants' claimed invention together provide operational advantages over Barnard, DeLorme, Ching, and Neal. In addition, Applicants' invention solves problems not recognized by Barnard, DeLorme, Ching, and Neal.

Thus, Applicants submit that independent claims 1, 2, 13, 15, 18, 20, 31, 33, 36, 38, 49, 51, and 54 are allowable over Barnard, DeLorme, Ching, and Neal. Further, dependent claims 3-12, 14, 16-17, 19, 21-30, 32, 34-35, 37, 39-48, 50, 52-53, and 55-62 are submitted to be allowable over

Barnard, DeLorme, Ching, and Neal in the same manner, because they are dependent on independent claims 1, 2, 13, 15, 18, 20, 31, 33, 36, 38, 49, 51, and 54, respectively, and thus contain all the limitations of the independent claims. In addition, dependent claims 3-12, 14, 16-17, 19, 21-30, 32, 34-35, 37, 39-48, 50, 52-53, and 55-62 recite additional novel elements not shown by Barnard, DeLorme, Ching, and Neal.

IX. Conclusion

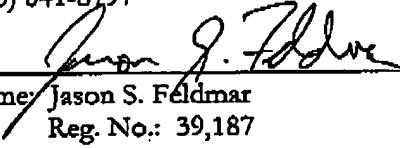
In view of the above, it is submitted that this application is now in good order for allowance and such allowance is respectfully solicited. Should the Examiner believe minor matters still remain that can be resolved in a telephone interview, the Examiner is urged to call Applicants' undersigned attorney.

Respectfully submitted,

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